

Appl. No. 10/687,771
Amdt. dated March 28, 2007
Reply to Office Action of December 29, 2006

Amendments to the Specification

Please amend the paragraphs in the specification as follows:

【 Paragraph on page 1, line 7 】

5 The present application is related to the co-pending application entitled
“Demodulation apparatus for a network transceiver and method thereof”, ~~Ser. No.~~
~~UNKNOWN~~ Application No. 10/687,671, filed on the same day as the present application
and assigned to the same assignee, the contents of which are herein incorporated by
reference.

【 Paragraph on pages 3 and 4, lines 12, 18 and 19 of page 3 and line 1 of page 4 】

10 To achieve the objects, a transceiver of a communication system is disclosed. ~~A~~
~~transceiver of a communication system is disclosed.~~ The transceiver comprises a
front-end receiver for generating a first signal with a pre-cursor component and a
post-cursor component according to a receiving signal, wherein the front-end receiver
further includes an inverse partial response (IPR) filter to compensate an ISI introduced
15 by a partial response filter in a transmitter part of a remote transceiver and an analog-to-
digital (A/D) converter to receive ~~[[the]]~~ an output signal of the IPR filter and convert the
output signal to the first signal with a digital format; a noise canceller coupled to the
front-end receiver for generating a second signal through eliminating the noise of the first
signal; a Feed-Forward Equalizer (FFE) coupled to the noise canceller for generating a
20 third signal through eliminating the pre-cursor component in the second signal according
to a transfer function including a plurality of adjustable constants, wherein the adjustable
constants ~~includes~~ include a main-tap and the value of the main-tap is predetermined; and
a decoder coupled to the FFE for decoding the third signal and eliminating the post-cursor
component in the third signal.

25 【 Paragraph on pages 4 and 5, line 23 of page 4 and line 1 of page 5 】

FIG. 2 shows a preferred embodiment of a receiver for a network transceiver
according to the present invention. In FIG. 2, the receiver includes a front-end receiver

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10, a feed-forward equalizer (FFE) 20, a noise canceller 30, a timing recovery (TR) 40 and a decoding system 50. The front-end receiver 10 is for receiving a signal and converting the signal to a first signal in digital form with a pre-cursor component and a post-cursor component. The noise canceller 30 is coupled to the front-end receiver 10
 5 for eliminating the noise of the first signal and thus generating a second signal. The FFE 20 is coupled to the noise canceller 30 for eliminating the pre-cursor component in the second signal and thus generating a third signal. The decoding system 50 is coupled to the FFE 20 for decoding the third signal and eliminating the post-cursor component in the third signal.

10 【 Paragraph on pages 7 and 8, line 15 】

The FFE 20 is coupled to the noise canceller 30 for generating a third signal through eliminating the pre-cursor component of the second signal. The FFE 20 includes an adaptive filter 21 and a digital auto-gain controller (DAGC) 22. The adaptive filter 21 is a finite impulse response filter. The circuit diagram of the adaptive filter 21 is shown in
 15 FIG. 4. In this embodiment, a transfer function of the adaptive filter 21 is $C_0Z^3 + C_1Z^2 + C_2Z^1 + 1 + C_4Z^{-1} + C_5Z^{-2} + C_6Z^{-3}$, where C_0 , C_1 , C_2 , C_4 , C_5 and C_6 are adjustable constants and Z [[is]] represents a delay element. The main-tap is set to [[c]] be 1. Through setting the main-tap to be a predetermined value, preferably, 1, the circuit complexity of the FFE 20 can be simplified. In addition, a right-hand tap
 20 adjacent to the main-tap C_4 is set to be 0.5 according to the simulation and the practical experiment. The DAGC 22 is coupled to the adaptive filter 21 for adjusting the magnitude of the signal outputted from the adaptive filter 21 to meet the operating range requirement of the decoding system 50. The adjustment of the DAGC 22 is based on the constants determined by the adaptive filter 21. Through setting the main-tap to be 1 and the
 25 right-hand tap adjacent to the main-tap C_4 to be 0.5, the output signal of the DAGC 22 must do the corresponding adjustment.